JC03 Rec'd PCT/PTO 03 JUN 2005

PTO-1390 (Rev. 02-2005)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371	ATTORNEY'S DOCKET NUMBER 53047-45121 U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/537514

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/US03/40148	3 December 2003	4 December 2002

TITLE OF INVENTION METHOD AND APPARATUS FOR AUTOMATED DETECTION OF TARGET STRUCTURES FROM MEDICAL IMAGES USING A 3D MORPHOLOGICAL MATCHING ALGORITHM

APPLICANT(S) FOR DO/EO/US

BAE, Kyongtae; JINSUNG, Kim

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
3. [ ] This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. [X] The US has been elected (Article 31).
5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. [ ] is attached hereto (required only if not communicated by the International Bureau).
   b. [X] has been communicated by the International Bureau.
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [ ] An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
   a. [ ] is attached hereto.
   b. [ ] has been previously submitted under 35 U.S.C. 154(d)(4).
7. [X] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [ ] are attached hereto (required only if not communicated by the International Bureau).
   b. [ ] have been communicated by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [X] have not been made and will not be made.
8. [ ] An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. [ ] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or Information Included:

11. [ ] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [ ] A preliminary amendment.
14. [ ] An Application Data Sheet under 37 CFR 1.76.
15. [ ] A substitute specification.
16. [ ] A power of attorney and/or change of address letter.
17. [ ] A computer-readable form of the sequence listing in accordance with PCT Rule 13*ter*.2 and 37 CFR 1.821- 1.825.
18. [ ] A second copy of the published International Application under 35 U.S.C. 154(d)(4).
19. [ ] A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. [X] Other items or information: return postcard

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

PTO-1390 (Rev. 02-2005)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
10753514	PCT/US03/40148	53047-45121

The following fees have been submitted	CALCULATIONS	PTO USE ONLY
21. ☒ Basic national fee $300	$ 300	
22. ☒ Examination fee If international preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4) ..... $100 All other situations $200	$ 200	
23. ☒ Search fee Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... $100 International Search Report prepared and provided to the Office ..... $400 All other situations $500	$ 100	
TOTAL OF 21, 22 and 23 =	$ 600	
☐ Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is $250 for each additional 50 sheets of paper or fraction thereof.		

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE	
44 - 100 =	0 /50 =	0	x $250	$ 0

Surcharge of $130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(h)).	$

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	$
Total claims	68 - 20 =	48	x $ 50	$ 2,400
Independent claims	8 - 3 =	5	x $200	$ 1,000
MULTIPLE DEPENDENT CLAIM(S) (if applicable)		0	+ $360	$ 0
			TOTAL OF ABOVE CALCULATIONS =	$ 4,000
☒ Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.				2,000
			SUBTOTAL =	$ 2,000
Processing fee of $130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(l)).			+	$
			TOTAL NATIONAL FEE =	$ 2,000
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property			+	$
			TOTAL FEES ENCLOSED =	$ 2,000
			Amount to be refunded:	$
			Amount to be charged:	$

a. ☐ A check in the amount of $ _____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. 20-0823 in the amount of $ 2,000 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 20-0823. A duplicate copy of this sheet is enclosed.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

Benjamin L. Volk, Jr.
Thompson Coburn, LLP
One US Bank Plaza
St. Louis, MO 63101

B L Volk

SIGNATURE

Benjamin L. Volk, Jr.

NAME

48,017

REGISTRATION NUMBER

FORM PTO-1390 (REV. 02-2005) Page 2 of 2

10/537514

JC17 Rec'd PCT/PTO 03 JUN 2005

PATENT COOPERATION TREATY
IN THE UNITED STATES RECEIVING OFFICE

CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence and the documents referred to as enclosed therein are being deposited with the United States Postal Service on this 3rd day of June 2005 in an envelope as "Express Mail Post Office To Addressee" Mailing Label Number EV580750786US addressed to: Commissioner for Patents, MAIL STOP PCT, P.O. Box 1450, Alexandria, VA 22313-1450 – Attn: DO/EO/US.

Benjamin L. Volk, Jr.
Print or Type Name

Signature

In re international application of
BAE, Kyongtae et al.

International Application No.
PCT/US03/40148

International Filing Date:
3 December 2003

For: Method and Apparatus for Automated Detection of Target Structures from Medical Images Using a 3D Morphological Matching Algorithm

Authorized Officer

Commissioner for Patents
MAIL STOP PCT
P.O. Box 1450
Alexandria, VA 22313-1450

Attn: DO/EO/US

TRANSMITTAL

Enclosed herewith please find:

1. Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Filing Under 35 U.S.C. 371;

2. Duplicate copy of this letter.

Please be hereby authorized to charge our deposit account 20-0823 for the required filing fees and file said national phase application.

Respectfully submitted,

Benjamin L. Volk, Jr.
Reg. No. 48,017
Thompson Coburn LLP
One US Bank Plaza
St. Louis, Missouri 63101
(314) 552-6000
(314) 552-7000 (fax)